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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,062	12/26/2000	Shinichi Shiotsu	001665	1988

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EXAMINER

LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,062

Applicant(s)

SHIOTSU ET AL.

Examiner

JOHN J LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments/Amendment

1. Applicant's arguments/amendments received on May 26, 2004 have been carefully considered but they are not persuasive because the teaching of all the cited references read on all the claims as set forth in the previous rejection. Therefore, the finality of this Office Action is deemed proper.

Contrary to the assertions at pages 20 - 23 of the Arguments, claims 1, 12, 23, 25, 33, 42, 51, and 53 are not patentable.

Re claim 1, 12, 23, 25, 33, 42, 51, and 53: Applicant argues that the reference of Lau et al. (US Patent number 6,690,657) does not teach the claimed invention “an information processing **device comprising** a plurality of **communication units** each having a wireless transceiver, and a monitoring and controlling unit for monitoring and controlling **said communication units**”. However, The Examiner respectfully disagrees with Applicant’s assertion that the Lau does not teach the claimed invention. Contrary to Applicant’s assertion, the Examiner is of the opinion that Lau teaches a repeater (information processing device) comprises a plurality of **communication units** (see Fig. 14, 16 for communication units such as antenna, power detector, control circuit), and each repeater has a wireless transceiver (transmitter and receiver (182) in Fig. 16) and monitoring unit (power detector (132) in Fig. 14) for monitoring the receiving power from the other communication units and controlling unit (130) in Fig. 14) for controlling **the communication units** (see Fig. 14-17 and column 7, lines 45 – column 8, lines 62), regarding claimed invention. More specifically, a repeater comprises a transceiver unit,

control unit, and power detector for controlling other units and detecting received power from other unit.

The Applicant also argues that the Lau does not teach the claimed invention “adjusts a communication condition of wireless transceiver of said one communication unit in accordance with the communication state of the other communication unit”.

However, The Examiner respectfully disagrees with Applicant’s assertion that the Lau does not teach the claimed invention. Contrary to Applicant’s assertion, the Examiner is of the opinion that Lau teaches output amplifier (one communication unit) also has controllable output power (communication condition), which control circuit (other communication unit) can adjust in response to commands, reducing or increasing transmit power, for reducing the potential interference (communication condition) (see column 8, lines 39 – 62 and Fig. 15, 16), regarding the claimed invention.

The claim does not require or limit the claimed limitation is interpreted as a certain function or a special detail.

Applicant’s attention is directed to the rejection below for the reasons as to why this limitation is not patentable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-9, 11-20, 22-30, and 32-59** are rejected under 35 U.S.C. 102(e) as being anticipated by Lau et al. (US Patent number 6,690,657).

Regarding **claim 1**, Lau discloses that an information processing device (a wireless repeater in Fig. 4) comprising a plurality of communication units (Fig. 4) each having a wireless transceiver (78, 68 in Fig. 4), and a monitoring (132 in Fig. 14) and controlling unit (130 in Fig. 14) for monitoring and controlling said communication units (Fig. 4) (Fig. 4, 14, 16 and column 7, lines 45 – column 8, lines 28 where teach there are plurality wireless repeaters/communication units, each unit has a transceiver antenna, control unit, and power detecting/monitoring unit). Lau teaches that the monitoring (132 in Fig. 14) and controlling unit (130 in Fig. 14), when at least one of said plurality communication units (Fig. 4) maintains a connection, iteratively monitors a communication state of at least another one of said plurality of communication units (Fig. 4, 14, 15 and column 7, lines 45 – column 8, lines 28 where teach each communication unit establishes and maintains connection with in range and power detector monitors signal strength level continuously for adjusting output power). Lau teaches that adjusts a communication condition (communication power) of the wireless transceiver of said one communication unit in accordance with the communication state (signal strength condition) of the monitored other communication unit (Fig. 4, 15, 16 and column 8, lines 29 – column 9, lines 24 where teach each wireless communication unit detects the signal strength and controls output power for adjusting response to commands from the base station).

Regarding **claim 2**, Lau discloses all the limitation, as discussed in claim 1.

Furthermore, Lau further discloses that the monitoring and controlling unit changes the transmission power level of said wireless transceiver of said one, connected communication unit to a lower level so that a RF signal transmitted from the wireless transceiver of said one communication unit may not substantially interfere with the reception of a RF signal by the wireless transceiver of said other communication unit (Fig. 15, 16, abstract, and column 8, lines 29 – column 9, lines 24).

Regarding **claim 3**, Lau discloses all the limitation, as discussed in claims 1 and 2. Furthermore, Lau further discloses that when a signal quality of a RF signal received by the transceiver of said other communication unit is below an allowable level, said monitoring and controlling unit changes the transmission power level of said wireless transceiver of said one, connected communication unit to a lower level (Fig. 15, 16, abstract, and column 8, lines 3 – column 9, lines 24).

Regarding **claim 4**, Lau discloses all the limitation, as discussed in claims 1 and 2. Furthermore, Lau further discloses that the monitoring and controlling unit iteratively monitors a current state of said other communication unit relating to a connection thereof or a state of said other communication unit relating to a connection thereof expected to occur within a short time period (column 10, lines 14 – 58 and Fig. 4, 17).

Regarding **claim 5**, Lau discloses all the limitation, as discussed in claims 1 and 3.

Regarding **claim 6**, Lau discloses all the limitation, as discussed in claim 1. Furthermore, Lau further discloses that the monitoring and controlling unit causes

another information processing device with which said information processing device is communicating through said one communication unit, to adjust a transmission condition of a wireless transceiver of a communication unit of said another information processing device, too (Fig. 6, 7 and column 5, lines 31 – column 6, lines 36).

Regarding **claim 7**, Lau discloses all the limitation, as discussed in claims 1 and 2. Furthermore, Lau further discloses that connected communication unit is controlled also in accordance with the monitored reception power and with an application activated for data transfer via said one communication unit or device data of another information processing device with which said information processing device is communicating (column 4, lines 41 – column 5, lines 7 and Fig. 5, 6).

Regarding **claim 8**, Lau discloses all the limitation, as discussed in claims 1 and 3.

Regarding **claim 9**, Lau discloses all the limitation, as discussed in claims 1 and 7.

Regarding **claim 11**, Lau discloses that the plurality of communication units conform with at least one of the Bluetooth standard, the wireless LAN standard and the mobile communication network mobile station standard (column 10, lines 38 – column 11, lines 7 and Fig. 3, 8).

Regarding **claim 12**, Lau discloses all the limitation, as discussed in claim 1. Furthermore, Lau further discloses that the monitoring and controlling unit iteratively monitoring communication states of said first and second communication when said first communication unit (mobile repeater in Fig. 4) maintains a connection (Fig. 4, 14, 16 and

column 7, lines 45 – column 8, lines 28). Lau teaches that the monitoring and controlling unit adjusting a transmission condition of the wireless transceiver of said first communication unit in accordance with the monitored communication states of said first and second communication units (modules in Fig. 4) (Fig. 4, 15, 16 and column 8, lines 29 – column 9, lines 24). Lau teaches that with an application activated in relation to the connection of said first communication unit or device data of another information processing device with which said information processing device is communicating through said first communication unit (Fig. 5, 6, 7 and column 5, lines 31 – column 6, lines 37).

Regarding **claim 13**, Lau discloses all the limitation, as discussed in claims 1 and 2.

Regarding **claim 14**, Lau discloses all the limitation, as discussed in claims 1 and 3.

Regarding **claim 15**, Lau discloses that device data is sent on a RF signal from a wireless transceiver of a communication unit of said another information processing device to the wireless transceiver of said first communication unit, and is supplied to said monitoring and controlling unit from said first communication unit (Fig. 6, 14 and column 7, lines 45 – column 8, lines 27).

Regarding **claim 16**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 17**, Lau discloses all the limitation, as discussed in claims 2 and 12.

Regarding **claim 18**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 19**, Lau discloses all the limitation, as discussed in claims 6 and 12.

Regarding **claim 20**, Lau discloses that a RF signal transmitted by the wireless transceiver of said first communication unit tends to more strongly interfere with a RF signal reception of the transceiver of said second communication unit than a RF signal transmitted by the wireless transceiver of said second communication unit does with a RF signal reception of the transceiver of said first communication unit (Fig. 15, 16 and column 8, lines 51 – column 9, lines 24).

Regarding **claim 22**, Lau discloses all the limitation, as discussed in claims 11 and 12.

Regarding **claim 23**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 24**, Lau discloses all the limitation, as discussed in claims 6 and 12.

Regarding **claim 25**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 26**, Lau discloses all the limitation, as discussed in claims 12 and 17.

Regarding **claim 27**, Lau discloses all the limitation, as discussed in claims 6 and 12.

Regarding **claim 28**, Lau discloses all the limitation, as discussed in claims 12 and 18.

Regarding **claim 29**, Lau discloses all the limitation, as discussed in claims 12 and 15.

Regarding **claim 30**, Lau discloses all the limitation, as discussed in claims 11 and 12.

Regarding **claims 32 and 59**, transmission condition is transmission power, a transmitter amplifier gain, an amount of attenuation provided by an attenuator, an antenna gain or an antenna direction (Fig. 4, 15, 16 and column 8, lines 29 – column 9, lines 24).

Regarding **claim 33**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 34**, Lau discloses all the limitation, as discussed in claims 2 and 12.

Regarding **claim 35**, Lau discloses all the limitation, as discussed in claims 3 and 12.

Regarding **claim 36**, Lau discloses all the limitation, as discussed in claims 4 and 12.

Regarding **claim 37**, Lau discloses all the limitation, as discussed in claims 5 and 12.

Regarding **claim 38**, Lau discloses all the limitation, as discussed in claims 6 and 12.

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Regarding **claim 39**, Lau discloses all the limitation, as discussed in claims 8 and 12.

Regarding **claim 40**, Lau discloses all the limitation, as discussed in claims 1 and 7.

Regarding **claim 41**, Lau discloses all the limitation, as discussed in claims 1 and 8.

Regarding **claim 42**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 43**, Lau discloses all the limitation, as discussed in claims 2 and 12.

Regarding **claim 44**, Lau discloses all the limitation, as discussed in claims 3 and 12.

Regarding **claim 45**, Lau discloses all the limitation, as discussed in claims 12 and 15.

Regarding **claim 46**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 47**, Lau discloses all the limitation, as discussed in claims 12 and 17.

Regarding **claim 48**, Lau discloses all the limitation, as discussed in claims 12 and 18.

Regarding **claim 49**, Lau discloses all the limitation, as discussed in claims 6 and 12.

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Regarding **claim 50**, Lau discloses all the limitation, as discussed in claims 11 and 12.

Regarding **claim 51**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 52**, Lau discloses all the limitation, as discussed in claims 6 and 12.

Regarding **claim 53**, Lau discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 54**, Lau discloses all the limitation, as discussed in claims 12 and 17.

Regarding **claim 55**, Lau discloses all the limitation, as discussed in claims 6 and 12.

Regarding **claim 56**, Lau discloses all the limitation, as discussed in claims 12 and 18.

Regarding **claim 57**, Lau discloses all the limitation, as discussed in claims 12 and 15.

Regarding **claim 58**, Lau discloses all the limitation, as discussed in claims 11 and 12.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 10, 21, and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lau in view of Mackay (US Patent number 6,600,727).

Regarding **claims 10, 21, and 31**, Lau does not specifically disclose the limitation “the plurality of communication units are formed in built-in or detachable modules”. However, Mackay discloses the limitation “the plurality of communication units are formed in built-in or detachable modules” (column 6, lines 51 – column 7, lines 8 and Fig. 8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Lau system as taught by Mackay. The motivation does so would be to improve repeater performance and achieve reducing cost in wireless communication system.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label
"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(703) 306-5936**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00

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pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on (703) 308-7745. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L.
July 27, 2004

John J Lee

A handwritten signature in black ink, appearing to read 'Nick Corsaro', with a long horizontal flourish extending to the right.

**NICK CORSARO
PATENT EXAMINER**